Amendments in the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

1. (Withdrawn) A particle comprising calcium phosphate having a pharmacologically active agent at least partially coating the particle or impregnating the particle or both, wherein the particle has a diameter between about 300 nm and about 4000 nm and is adapted to be delivered to a mucosal surface.

2. (Withdrawn) The particle of claim 1, wherein the pharmacologically active agent is selected from the group consisting of vaccines, antigenic materials, natural immunoenhancing factors, oligonucleotide material encoding immunogenic polypeptides, therapeutic drugs, and combinations thereof.

3. (Withdrawn) The particle of claim 1, wherein the pharmacologically active agent is herpes simplex-2.

4. (Withdrawn) The particle of claim 1, further comprising a pharmaceutically acceptable excipient.

5. (Previously presented) A method for inducing immunity in a patient, comprising delivering a particle comprising calcium phosphate having a pharmacologically active agent at least partially coating the particle or impregnating the particle or both, wherein the particle has a diameter between about 300 nm and about 4000 nm and has a substantially spherical shape and a substantially smooth surface to a mucosal surface of the patient in need thereof, wherein the pharmacologically active agent is an antigen.

6. (Original) The method of claim 5, wherein the mucosal surface is selected from the group consisting of a nasal surface, upper airway, lower airway, pulmonary surface, oral surface, ocular surface, vaginal surface, and rectal surface.

7. (Original) The method of claim 5, wherein the particle is complexed with a pharmaceutically acceptable excipient and delivered as a spray, an aerosol, an ointment, an eye drop, a gel, a suspension, a capsule, a suppository, an impregnated tampon, or combinations thereof.

8. (Withdrawn) A method for preparing particles suitable for eliciting a mucosal immune response, comprising:

(a) mixing an aqueous solution of calcium chloride with an aqueous solution of sodium citrate to form a mixture;

(b) adding an aqueous solution a sodium phosphate to the mixture to form a solution;

(c) stirring the solution until particles of the desired size and comprising calcium phosphate are obtained; and

(d) (i) contacting the particles with an antigenic material to form particles that are at least partially coated with the antigenic material, (ii) adding antigenic material with the aqueous solution of calcium chloride, the aqueous solution of sodium citrate, or the aqueous solution a sodium phosphate to form particles that have antigenic material at least partially impregnating the particle, or (iii) both (i) and (ii) to form particles that are at least partially coated and at least partially impregnated with antigenic material.

9. (Withdrawn) The method of claim 8, wherein the stirring comprising sonicating.

10. (Withdrawn) A method for delivering a pharmacologically active agent to a patient, comprising delivering a particle of claim 1 to a mucosal surface of the patient in need thereof.

11. (Withdrawn) A method for preparing the particles of claim 1, comprising:

(a) mixing an aqueous solution of calcium chloride with an aqueous solution of sodium citrate to form a mixture;

(b) adding an aqueous solution of sodium phosphate to the mixture to form a solution;

(c) stirring the solution until particles of the desired size and comprising calcium phosphate are obtained; and

(d) conducting one or more of

(i) contacting the particles with an pharmacologically active agent to form particles that are at least partially coated with the pharmacologically active agent,

(ii) adding the pharmacologically active agent with the aqueous solution of calcium chloride, the aqueous solution of sodium citrate, or the aqueous solution a sodium phosphate to form particles that have the pharmacologically active agent at least partially impregnating the particle, or

(iii) conducting both (i) and (ii) to form particles that are at least partially coated and at least partially impregnated with the pharmacologically active agent.

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